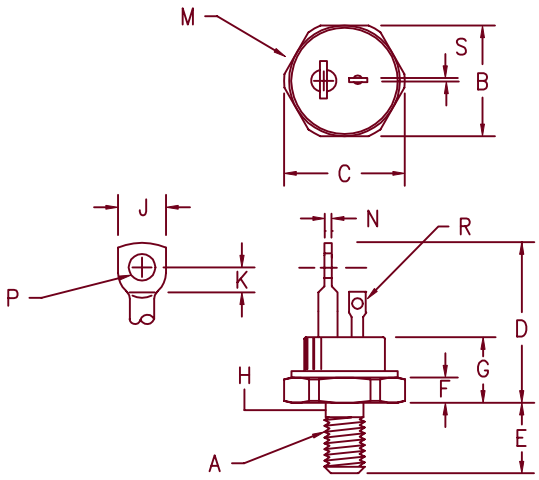
查询05002GOF供应商

# Silicon Controlled Rectifier
# Series 050




| Dim. | Inches | | Millimeter | | |
|---|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum | Notes |
| A | --- | --- | --- | --- | 1 |
| B | .677 | .685 | 17.20 | 17.40 | |
| C | --- | .770 | --- | 19.56 | |
| D | 1.200 | 1.250 | 30.48 | 31.75 | |
| E | .427 | .447 | 10.84 | 11.35 | |
| F | .115 | .155 | 2.92 | 3.94 | |
| G | --- | .515 | --- | 13.08 | |
| H | .220 | .249 | 5.58 | 6.32 | 2 |
| J | .200 | .300 | 5.08 | 7.62 | |
| K | .120 | --- | 3.05 | --- | |
| M | --- | .667 | --- | 16.94 | Dia. |
| N | .065 | .085 | 1.65 | 2.15 | |
| P | .145 | .155 | 3.68 | 3.93 | Dia. |
| R | .055 | .065 | 1.40 | 1.65 | Dia. |
| S | .025 | .030 | .64 | .76 | |

Note 1: 1/4-28 UNF-3A
Note 2: Full thread within 2 1/2 threads

TO-208AC (TO-65)

| Microsemi Catalog Number | Forward & Reverse Repetitive Blocking VDRM, VRRM | Reverse Transient Blocking |
|---|---|---|
| 05002GOF | 200 | 300 |
| 05004GOF | 400 | 500 |
| 05006GOF | 600 | 700 |
| 05008GOF | 800 | 900 |
| 05010GOF | 1000 | 1100 |
| 05012GOF | 1200 | 1300 |

To specify dv/dt other than 200V/usec., contact factory.

- dv/dt-200 V/usec
- 1200 Amperes surge current
- Economical for medium power applications
- Compact TO-208AC package

## Electrical Characteristics

| | | | |
|---|---|---|---|
| Max. RMS on-state current | $I_{T(RMS)}$ | 80 Amps | $T_C$ = 94°C |
| Max. average on-state cur. | $I_{T(AV)}$ | 50 Amps | $T_C$ = 94°C |
| Max. peak on-state voltage | $V_{TM}$ | 2.3 Volts | $I_{TM}$ = 500 A(peak) |
| Max. holding current | $I_H$ | 200 mA | |
| Max. peak one cycle surge current | $I_{TSM}$ | 1200 Amps | $T_C$ = 94°C 60Hz |
| Max. $I^2t$ capability for fusing | $I^2t$ | 6000$A^2S$ | t = 8.3 ms |

## Thermal and Mechanical Characteristics

| | | |
|---|---|---|
| Operating junction temp range | $T_J$ | -65°C to 125°C |
| Storage temperature range | TSTG | -65°C to 150°C |
| Maximum thermal resistance | $R_{\theta JC}$ | 0.35°C/W Junction to case |
| Typical thermal resistance (greased) | $R_{\theta CS}$ | 0.20°C/W Case to sink |
| Mounting torque | | 25-30 inch pounds |
| Weight | | 0.56 ounces (16 grams) typical |

8-31-00 Rev. 1

COLORADO Microsemi
800 Hoyt Street
Broomfield, CO. 80020
PH: (303) 469-2161
FAX: (303) 466-3775
www.microsemi.com

# 050

$T_J$ = 25°C unless otherwise indicated

## Switching

| | | | |
|---|---|---|---|
| Critical rate of rise of on-state current (note 1) | di/dt | 200A/usec. | $T_J$ = 125°C |
| Typical delay time (note 1) | $t_d$ | 3.0 usec. | |
| Typical circuit commuted turn-off time (note 2) | $t_q$ | 100 usec. | $T_J$ = 125°C |

Note 1: $I_{TM}$ = 50A, $V_D$ = $V_{DRM}$. GT = 12V open circuit, 20 ohm-0.1 usec. rise time
Note 2: $I_{TM}$ = 50A, di/dt = 5A/usec., $V_R$ during turn-off interval = 50V min., reapplied dv/dt = 20V/usec., linear to rated $V_{DRM}$, $V_{GT}$ = 0V

## Triggering

| | | | |
|---|---|---|---|
| Max. gate voltage to trigger | $V_{GT}$ | 3.0V | |
| Max. nontriggering gate voltage | $V_{GD}$ | 0.25V | $T_J$ = 125°C |
| Max. gate current to trigger | $I_{GT}$ | 100mA | |
| Max. peak gate power | $P_{GM}$ | 10W | |
| Average gate power | $P_{G(AV)}$ | 1.0W | $t_p$ = 10 usec. |
| Max. peak gate current | $I_{GM}$ | 3.0A | |
| Max. peak gate voltage (forward) | $V_{GM}$ | 20V | |
| Max. peak gate voltage (reverse) | $V_{GM}$ | 10V | |

## Blocking

| | | | |
|---|---|---|---|
| Max. leakage current | $I_{DRM}$ | 6mA | $T_J$ = 125°C & $V_{DRM}$ |
| Max. reverse leakage | $I_{RRM}$ | 6mA | $T_J$ = 125°C & $V_{RRM}$ |
| Critical rate of rise of off-state voltage | dv/dt | 200V/usec. | $T_J$ = 125°C |

# 050

Figure 1
Typical Forward On-State Characteristics

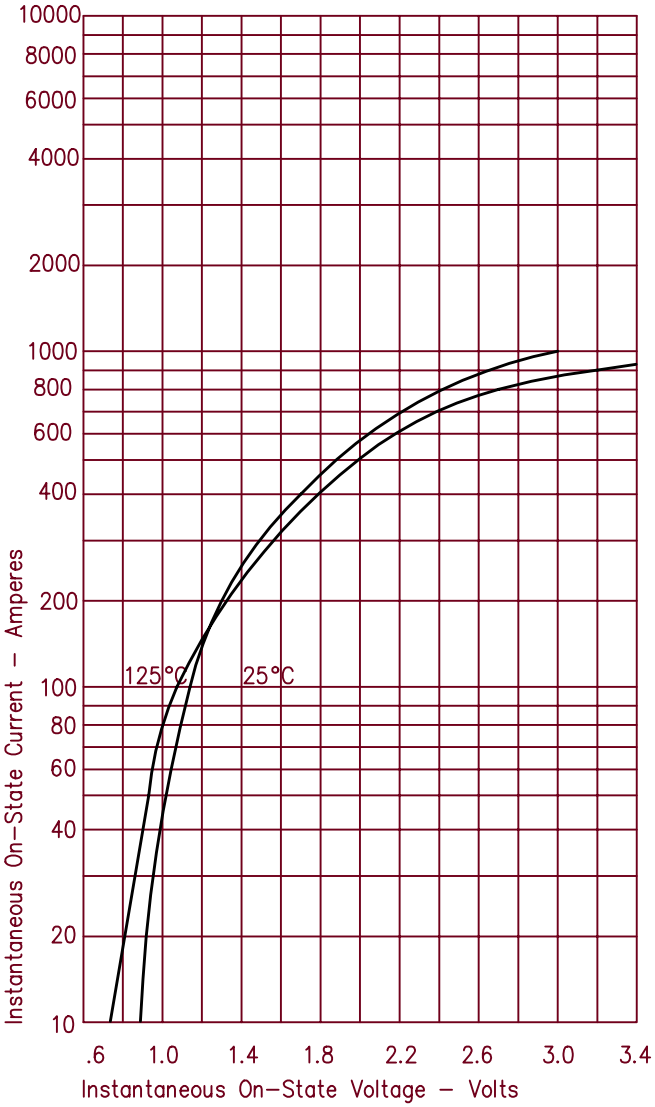



Figure 2
Forward Current Derating

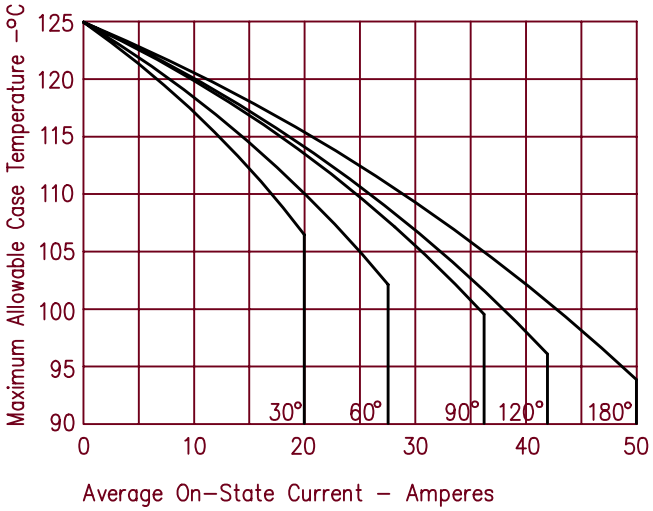



Figure 3
Maximum Power Dissipation

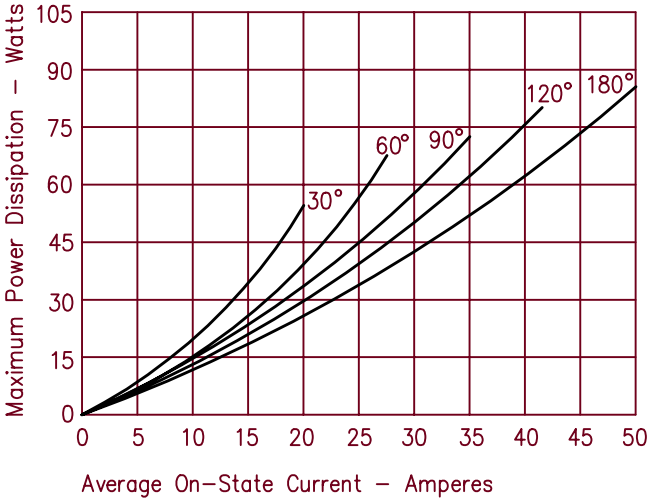



Figure 4
Transient Thermal Impedance

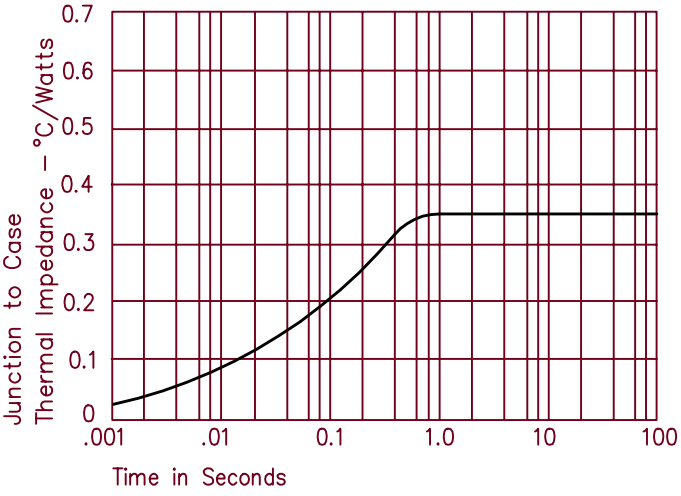



Figure 5
Maximum Nonrepetitive Surge Current